

Claims

1. A molded container capable of standing upright, for infusion liquids, said container comprising walls (12, 13) which form a flat standing bottom (20) allowing the container to stand upright and a shoulder portion (14) transforming into a neck portion (15), fold lines (BL) being formed in the walls of the standing bottom (20) and/or the shoulder portion (14),

characterized in

that the fold lines (BL) are arranged and configured such that they cause a flattening of the portion having the fold lines when liquid is withdrawn from the container (10) without ventilation.

2. The container of claim 1, characterized in that the fold lines (BL) are formed by weakened portions in the walls (13).

3. The container of claim 1 or 2, characterized in that a plurality of fold lines (BL) are arranged in a group of fold lines (26) such that they form an accordion-like folding.

4. The container of one of claims 1 – 3, characterized in that the standing bottom (20) is formed with a fold line (25a) as a transverse fold that moves outward during flattening.

5. The container of one of claims 1 – 4, characterized in that at least one fold line (28) extends as a longitudinal fold from the standing bottom (20) into the shoulder portion (14).

6. The container of one of claims 1 – 5, characterized in that the filled container contains a volume of air of at most 15% of the container volume.

7. The container of one of claims 1 – 6, characterized in that the filling volume of the container is 1 ml to 5000 ml.

8. The container of one of claims 1 – 7, characterized in that the neck portion (15) is provided with a port system (16) comprising a pierceable membrane.
9. The container of one of claims 1 – 8, characterized in that the standing bottom (20) comprises a projecting suspension lug (22).
10. A method for manufacturing a molded standing container for infusion liquids of one of claims 1-9, wherein a single-layered or multi-layered hollow preform (50, 51) is formed by extrusion and is subsequently expanded by blow molding to form the container (40).
11. The method of claims 10, characterized in that the container (40) is made with a wall thickness of 0.1 to 0.7 mm, so that its wall flattens under the effect of atmospheric pressure when liquid is withdrawn from the container without venting.
12. The method of claim 10 or 11, wherein the transparency of the container (40) to be produced is increased by axially stretching the tubular preform (50, 51).
13. The method of one of claims 10 – 12, characterized in that, with a multi-layered container (40), the inner layer (42) is made of polypropylene, preferably a polypropylene copolymer.
14. The method of one of claims 10 – 13, characterized in that, with a multi-layered container (40), at least one of the layers is a layer (43, 45) of adhesive agent.
15. The method of one of claims 10 – 14, characterized in that, with a multi-layered container (40), at least one barrier layer (44) is made from a polyamide or an ethylene/vinyl alcohol.
16. The method of one of claims 10 – 15, characterized in that, with a multi-layered container (40), the outer layer (46) is made of a polyamide or a polyester.

17. The method of one of claims 10 – 16, characterized in that, with a multi-layered container (40), 40% to 70% of the wall thickness are made up by the inner layer (42), 10% by the barrier layer (44) and at least one layer (43, 45) of adhesive agent, and the rest is made up by the outer layer (46).

18. A method for filling a container of one of claims 1 – 9 with infusion liquid, characterized in that the container is impressed after molding to reduce its volume and is filled and closed in this state, the impressing providing for a backup volume for receiving a supplementary volume injected later.